

FIG. 1 (RELATED ART)

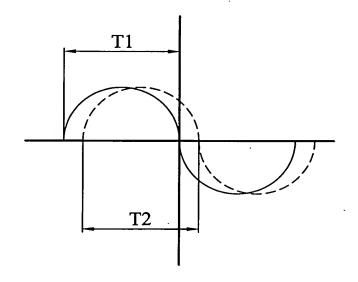


FIG. 2 (RELATED ART)

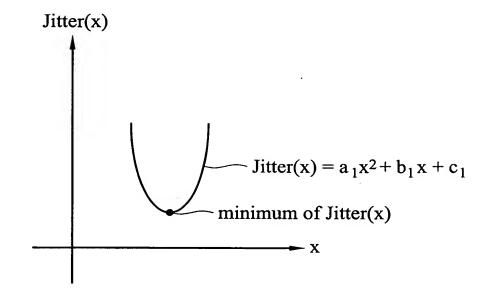


FIG. 3 (RELATED ART)

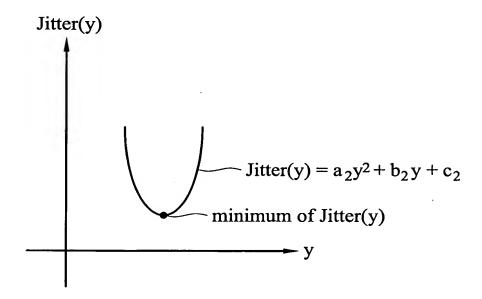


FIG. 4 (RELATED ART)

Measuring the optical pickup head with the jitter meter using quadric surface equations

Jitter(x) = $a_1x^2 + b_1x + c_1$ and

 $Jitter(y) = a_2y^2 + b_2y + c_2$

Initializing a tilt angle Y in radial direction to zeor for the first time

Obtaining the first data point $(x_1,0)$ of X in radial direction and Z_1 =Jitter (x_1)

Initializing the tilt angle Y in radial direction to zeor for the second time

Obtaining the second data point $(x_2,0)$ of X in radial direction and Z_2 =Jitter (x_2)

Initializing the tilt angle Y in radial direction to zeor for the third time

Obtaining the third data point $(x_3,0)$ of X in radial direction and Z_3 =Jitter (x_3)

Listing the three sets of the tilt angles $(x_1,0)$, $(x_2,0)$ and $(x_3,0)$ and a simultaneous equation set related to corresponding the jitter values Z_1 , Z_2 and Z_3

Solving the simultaneous equation to obtain the result of a_1 , b_1 and c_1

Substituting the values of a_1 , b_1 and c_1 in the quadric surface equation to obtain a quadric surfaces equation Jitter(x) = $a_1x^2 + b_1x + c_1$

Obtaining a minimum jitter value of Jitter(x) and an optimum tilt angle in radial direction

FIG. 5 (RELATED ART)

Initializing the tilt angle X in tangential direction to zeor for the first time

Obtaining the first data point $(0,y_1)$ of X in radial direction and Z_1 =Jitter (y_1)

Initializing the tilt angle X in tangential direction to zeor for the second time

Obtaining the second data point $(0,y_2)$ of X in radial direction and Z_2 =Jitter (y_2)

Initializing the tilt angle X in tangential direction to zeor for the third time

Obtaining the third data point $(0,y_3)$ of X in tangential direction and Z_3 =Jitter (y_3)

Listing the three sets of the tilt angles $(0,y_1)$, $(0,y_2)$ and $(0,y_3)$ and a simultaneous equation set related to corresponding the jitter values Z_1 , Z_2 and Z_3

Solving the simultaneous equation to obtain the result of a₂, b₂ and c₂

Substituting the values of a_2 , b_2 and c_2 in the quadric surfaces empirical equation to obtain a quadric surfaces equation $Jitter(y) = a_2y^2 + b_2y + c_2$

Obtaining a minimum jitter value of Jitter(y) and an optimum tilt angle in tangential direction

Producing a bar code in accordance with the minimum jitter values of Jitter(x) and Jitter(y) to be a basis for adjusting the emitting angle of the optical pickup head

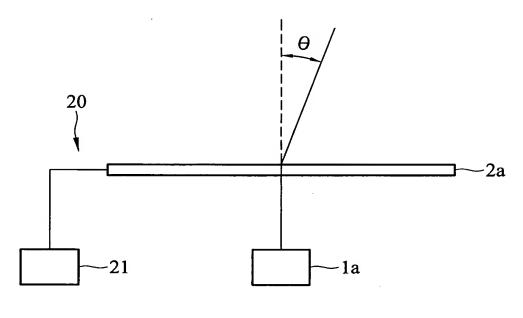


FIG. 6

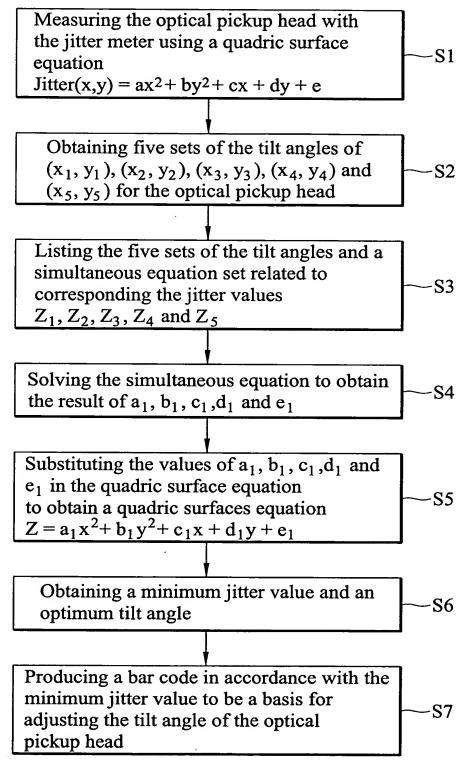


FIG. 7

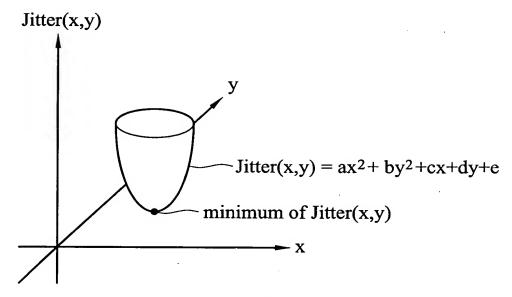


FIG. 8